

Application No.: 10/693,052

Docket No.: JCLA9844

REMARKS**Present Status of the Application**

The Office Action rejected claims 7-9 under 35 U.S.C. 102(b) as being anticipated by Yoshida et al. (US 5,764,610, hereinafter Yoshida). The Office Action rejected claim 10 under 35 U.S.C. 103(a), as being unpatentable over Yoshida, as applied to claim 7 above, and further in view of Hira (US 5,381,392, hereinafter Hira). The Office Action rejected claims 11-13 under 35 U.S.C. 103(a), as being unpatentable over Yamada et al. (US 5,831,952, hereinafter Yamada) in view of Yoshida. The Office Action rejected claim 14 under 35 U.S.C. 103(a), as being unpatentable over Yamada and Yoshida, as applied to claim 11 above, and further in view of Hira. The Office Action rejected claims 15-18 under 35 U.S.C. 103(a), as being unpatentable over Yamada and Yoshida, as applied to claim 11 above, and further in view of Kumagai (US 6,005,832, hereinafter Kumagai).

Claims 7-18 remain pending in the present application.

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Discussion of Office Action Rejections under 35 U.S.C. 102

Claims 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshida.

Applicant respectfully traverses the rejections of Claims 7-9 under 35 U.S.C. 102(b) because Yoshida does not teach every recitation of these claims.

In order to properly anticipate Applicant's claimed invention under 102, each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Further, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." See MPEP §2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Finally, "[t]he elements must be arranged as required by the claim." See MPEP § 2131.

Yoshida discloses an optical disk type identification system using a frequency detector. In Yoshida, the disk is identified as DVD or CD based on whether the wobble signal has a frequency of 22.05 KHz or not. If the wobble signal has a frequency of 22.05 KHz, the disk is identified as DVD; and vice versa. The wobble signal detection circuit 9s is used to determine the frequency of the wobble signal is of 22.05 KHz or not.

If a DVD disk is placed in an optical disk drive: As known, the wobble signal of the DVD disk is about 22.05KHz. So, even after filtered by the BPF 91 (having a center frequency of

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22.05KHz), most DVD wobble signal pass the BPF 91. then, the P/H circuit 92 samples a peak value of the BPF 91's output signal. However, please note that the reference values Vref1 and Vref2 are voltage reference signals (or amplitude reference signals), rather than frequency reference signals. The setting of the reference values Vref1 and Vref2 is as: Vref1 is smaller than a minimum value of the peak level obtained via the BPF 91 and the P/H circuit 92; and Vref2 is greater than a maximum value of the peak level obtained via the BPF 91 and the P/H circuit 92. In other words, in case of DVD disk, the peak value obtained from the P/H circuit 92 is basically between Vref1~Vref2; i.e. an H signal from the comparator 93 and an L signal from the comparator 94. So, if an H signal from the comparator 93 and an L signal from the comparator 94, the optical disk is identified as a DVD disk.

If a CD disk is placed in an optical disk drive: As known, the wobble signal of the CD disk is not about 22.05KHz. So, after filtered by the BPF 91 (having a center frequency of 22.05KHz), most CD wobble signal is filtered by the BPF 91. Then, the P/H circuit 92 samples a very small peak value of the BPF 91's output signal, even a 0-level peak signal. In other words, in case of CD disk, the peak value obtained from the P/H circuit 92 is basically smaller than both Vref1 and Vref2; i.e. an H signal from the comparator 93 and an H signal from the comparator 94. So, if an H signal from the comparator 93 and an H signal from the comparator 94, the optical disk is identified as a CD disk.

Therefore, in Col. 3, Lines 9-12 of Yoshida, the frequency detecting means is the wobble

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signal detection circuit 9 is for detecting frequency of a playback signal (i.e. the wobble signal).

However, in claim 7 of the application, the "clock frequency" refers to the PLL clock frequency. This PLL clock frequency is a clock frequency used for reading the optical disk, rather than a playback signal read from the optical disk to be identified. But in Yoshida, it is detected whether the playback signal (wobble signal) is 22.05KHz or not, not to determine whether the clock frequency is 22.05KHz or not.

Further, in Claim 7 of the application, the PLL clock frequency is compared with the frequency threshold value. But in Yoshida, the way to determine the frequency of the wobble signals it to compare the output signal of the P/H circuit 92 with the voltage (amplitude) reference values Vref1 and Vref2.

Therefore, Applicant respectfully submits that Yoshida does not teach each and every limitation of Claim 7 in the application and that the rejection of this claim under 35 U.S.C. 102(b) be withdrawn and the claim allowed.

Claims 8-9 depend from claim 7. As explained, claim 7 is distinguishable from Yoshida. Accordingly, claims 8-9 are also distinguishable from this reference for at least the same reasons set forth in connection with base claim 7. Further, this reference fails to teach or suggest the recitations of claims 8-9.

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Accordingly, because Yoshida fails to teach all of the recitations of claims 8-9, Applicant requests that the Examiner withdraw the rejection of these claims under 35 U.S.C. 102(b) and allow the claims.

Discussion of Office Action Rejections under 35 U.S.C. 103

I. Claim 10

The Office Action rejected claim 10 under 35 U.S.C. 103(a), as being unpatentable over Yoshida, as applied to claim 7 above, and further in view of Hira. Applicant respectfully traverses the rejections of claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Yoshida in view of Hira.

To establish a prima facie case of obviousness under 35 U.S.C. § 103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. See MPEP § 2143.

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The Examiner failed to establish prima facie obviousness in rejecting Claim 10 because Yoshida and Hira, taken alone or combined, fail to teach or suggest, among other things, the limitations as recited in Claim 7 and 10.

As discussed above, Yoshida does not disclose each and every limitation of the base claim 7. Therefore, Yoshida could not disclose each and every limitation of Claim 10 depending on base Claim 7.

Further, Hira could not cure deficiencies of Yoshida in rejection of Claim 10. Hira's col. 3 and Lines 53-63 just disclose a mechanism to detect the wobble frequency of the guide groove and the discrimination of the blank disc cannot be performed unless it performs an access unit the most outer circumference. Therefore, Hira does not disclose to obtain the PLL clock frequency and to discriminate the disk as blank disc if the detected PLL clock if the obtained PLL clock frequency is 0. Applicant respectfully submits that Hira does not disclose the limitation of "determining the optical storage medium as a blank disk when the clock frequency is substantially zero" as recited in Claim 10.

For at least these reasons, the Examiner has not established a prima facie case of obviousness with respect to claim 10. Thus, because the cited art does not support the rejection of claim 10 under 35 U.S.C. 103(a), Applicants request that the rejection be withdrawn and the claim allowed.

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II. claims 11-13

The Office Action rejected claims 11-13 under 35 U.S.C. 103(a), as being unpatentable over Yamada in view of Yoshida. The Office Action rejected claim 14 under 35 U.S.C. 103(a), as being unpatentable over Yamada and Yoshida, as applied to claim 11 above, and further in view of Hira. The Office Action rejected claims 15-18 under 35 U.S.C. 103(a), as being unpatentable over Yamada and Yoshida, as applied to claim 11 above, and further in view of Kumagai. Applicant respectfully traverses the rejections of these claims under 35 U.S.C § 103(a).

The Examiner failed to establish prima facie obviousness in rejecting base Claim 11 because Yamada in view of Yoshida, taken alone or combined, fail to teach or suggest, among other things, the limitations as recited in Claim 11.

In Yamada, the disc in the optical disk drive is discriminated as a disk having a thick base substrate or a disk having a thin base substrate. For CD disk, the thickness of the base substrate is about 1.2 mm while for DVD disc, the thickness of the base substrate is about 0.6 mm. For this purpose, the maximum value AS1Lmax of the AS1L signal and the maximum value ENVmax of the ENV signal.

As in Yamada's Col. 19 lines 13-30, the level of the ENV signal and the level of the AS1L

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signal may be affected by (1) the reflectivity of the surface layer (for example, the surface layer of the double-layer DVD has a lower reflectivity than the single-layer DVD); and (2) the absorptivity is different.

Therefore, Yamada discriminates whether the disk set in the optical disk drive is a disk having a thick base substrate or a disk having a thin base substrate on the basis of the ratio of ENV_{max} to $AS1L_{max}$.

However, in Claim 11 of the application, the distance between the reflection layer and the surface layer is compared to determine the disk type. But Yamada does neither disclose to obtain the distance between the reflection layer and the surface layer nor comparison of the distance with a distance threshold.

Further, claim 11 has similar limitations with Claim 7. As discussed above, Claim 7 has distinguishable features from Yoshida. Further, Yamada does not disclose to obtain a clock frequency for reading the disk and compare the clock frequency with frequency threshold to discriminate the disk type.

Therefore, Applicant respectfully submits that Yamada and Yoshida, even combined, do not disclose "... to obtain a distance between a reflection layer and a surface layer of the optical storage medium; and comparing the obtained distance with a distance threshold to discriminate the optical

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storage medium, wherein a clock frequency is obtained for reading the optical storage medium to discriminate the optical storage medium when the obtained distance is larger than a failure threshold, wherein the clock frequency is compared with a frequency threshold to discriminate a type of the optical storage medium, wherein the optical storage medium is discriminated as a DVD when the clock frequency is larger than the frequency threshold and the optical storage medium is discriminated as a CD when the clock frequency is smaller than the frequency threshold” as recited in Claim 11.

For at least these reasons, the Examiner has not established a prima facie case of obviousness with respect to claim 11. Thus, because the cited art does not support the rejection of claim 11 under 35 U.S.C. 103(a), Applicants request that the rejection be withdrawn and the claim allowed.

Claims 12-13 depend from claim 7. As explained, claim 11 is patentable over Yamada in view of Yoshida. Accordingly, claims 12-13 are also distinguishable from this reference for at least the same reasons set forth in connection with base claim 11. Further, this reference fails to teach or suggest the recitations of claims 12-13.

Accordingly, Applicant requests that the Examiner withdraw the rejection of these claims under 35 U.S.C. 103(a) and allow the claims.

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III. Claim 14

The Office Action rejected claim 14 under 35 U.S.C. 103(a), as being unpatentable over Yamada and Yoshida, as applied to claim 11 above, and further in view of Hira.

Hira just disclose a mechanism to detect the wobble frequency of the guide groove and the discrimination of the blank disc cannot be performed unless it performs an access unit the most outer circumference. In other words, Hira does not disclose to obtain the PLL clock frequency and to discriminate the disk as blank disc if the detected PLL clock if the obtained PLL clock frequency is 0. Therefore, Hira cannot cure deficiencies of Yamada in view Yoshida in rejections of Claim 14.

For at least these reasons, the Examiner has not established a prima facie case of obviousness with respect to claim 14. Thus, because the cited art does not support the rejection of claim 14 under 35 U.S.C. 103(a), Applicants request that the rejection be withdrawn and the claim allowed.

IV. Claim 15-18

The Office Action rejected claim 15-18 under 35 U.S.C. 103(a), as being unpatentable over Yamada and Yoshida, as applied to claim 11 above, and further in view of Kumagai.

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Kumagai discloses a feature by comparing the measured time t_x to the time t_{TH} to judge whether the optical disk loaded is CD or DVD. However, please note, in Kumagai, the measured time t_1 is the time between the pulses DD obtained respectively associated with the disc surface and the signal surface. In other words, the pulse DD is related to vertical (thickness) direction of the disk loaded. So is another measured time t_2 .

However, in the claimed application, the data transition points is related to the tracks on the signal surface (or signal recording) layer of the disk loaded as shown in Fig. 1 of the application. In other words, the data transition points is related to the horizontal (surface) direction of the disk loaded, rather than the thickness direction of the disk loaded.

Therefore, the combination of Yamada, Yoshida and Kumagai cannot make Claims 15-18 obvious.

For at least these reasons, the Examiner has not established a prima facie case of obviousness with respect to claims 15-18. Thus, because the cited art does not support the rejection of claim 15-18 under 35 U.S.C. 103(a), Applicants request that the rejection be withdrawn and the claims allowed.

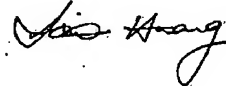
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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 7-18 are in proper condition for allowance and an action to such an effect is earnestly solicited. If the Examiner believes that a telephonic conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,
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